

PSYCHE.

ORGAN OF THE CAMBRIDGE ENTOMOLOGICAL CLUB

EDITED BY B. PICKMAN MANN.

Vol. I.] Cambridge, Mass., October, 1876. [No. 30.

Entomology at the Centennial Exhibition.

As the Centennial Exhibition is intended to display the industrial products of all nations, silk insects and silk in its stages of manufacture form an important part of the entomological representation.

Of the States of the Union, California makes the finest displays, one of feeding larvæ, cocoons and raw silk, from Joseph Neumann of San Francisco, in the Main Building, and a similar display in the State Building. E. V. Boissiere of Williamsburg, Kansas, exhibits cocoons and silk in the Main Building.

Undoubtedly the most interesting display of sericulture is made by Capt. Luis de Rezende, in the Brazilian Department of Machinery Hall; this comprises eggs, feeding larvæ, cocoons, and silk-reeling apparatus in operation.

In the East Indian Department of the Main Building are specimens of silk, figures of larvæ, and imagos of *Antheraea paphia* [*Saturnia mylitta* Fab.], the Tussar silkworm; of *Bombyx mori*; of *B. croesi*, the Nistry silkworm; of crosses of *B. mori* and *B. croesi* with each other, and with *B. fortunatus*, the Bengal or Dasee species; of *B. huttoni*, the native Himalayan species; and of *Attacus ricini* [*Saturnia arrindia* Miln.-Edw.], the Eria silkworm.

The Zoölogical and Acclimatization Society of Victoria exhibits a case containing cocoons of twenty varieties of European, twenty of Oriental, and nine of Australian silkworms, the latter including *Saturnia cecropia*, *S. ailianthus* [*S. cynthia* Drury], *S. yama-mai*, *S. eria* [*S. arrindia* Miln.-Edw.], *S.*

pernyi, *S. selene*, *S. assama*, and *S. atlas*. Other silk exhibits are to be found in the departments of the Main Building occupied by Victoria, South Australia, Queensland and New South Wales, as well as from Spain, Portugal, Italy, Egypt, Chili, and Turkey, the last mentioned country exhibiting a very fine lot of cocoons and raw silk.

In the Agricultural Building, Portugal displays cocoons from many different exhibitors, and Japan shows silk and cocoons, and a few good illustrations of silk insects in different stages, including a figure of the internal anatomy of *Bombyx mori*, with explanatory notes, by N. Sasaki.

There are only a few collections arranged to illustrate scientific and economic entomology, yet several of them are excellent. At the head of the list should be placed the collection exhibited by the United States Agricultural Department, in the Government Building.¹ This collection, numbering twenty-six cases of insects arranged by Mr. F. G. Sanborn, classifies the insects in accordance with the benefit or injury they do to man. For example, "Insects injuring the Grape Vine, or its Fruit," are represented in one case, and number thirty-one species. Silk-producing insects occupy two cases. Thirty-one species of insects beneficial as scavengers, and seventy species beneficial by destroying other insects are shown. A case is devoted to insecticidal devices, and another to insects available as food for man. A complete generic bill of fare enumerating the delicacies exhibited in this case would offer Oedipoda, Acridium, Rhomalea, Brachypeplus, Pezotettix, Phaneroptera, Phylloptera, Stenopelmatus, Caloptenus, Notonecta and eggs, and Corixa and eggs.

In the Kansas State Building is a fine exhibit, consisting of thirty cases of insects, of all the suborders, from that State. The specimens in this collection are very good, but the names, in some cases, are incorrectly given.

Canadian insects are represented, in the Agricultural Building, by the best scientific collection on exhibition, consisting of forty-five cases of Lepidoptera, twenty-seven of Coleoptera,

¹ For further description of this collection see *Field and Forest*, Vol. ii, p. 21-24.

and fourteen of other insects, all carefully preserved and labelled, and tastily displayed. This very creditable exhibit is made by the Entomological Society of Ontario,¹ and exemplifies what any active society can accomplish, by a few years of actual collecting, towards determining a local fauna. Chas. Foley, of Lindsay, Ontario, exhibits a few boxes of insects at the same place.

In the Brazilian Department of the Main Building is a fine collection of insects from the Province of Parana, belonging to J. Francisco Suplicy, of Lapa. This collection was exhibited in 1875, in the Fourth Brazilian Exhibition. A case of about two hundred well preserved Brazilian Lepidoptera is exhibited in Machinery Hall.

In the Main Building, the South Kensington Museum of London exhibits a series of galls, and figures of galls and gall-insects; Queensland a case of Lepidoptera, containing about two hundred species; Victoria is represented by two cases, one of about three hundred species of Coleoptera, and the other of about two hundred species of Lepidoptera; the Government of the Orange Free States of South Africa has on exhibition two cases, containing about five hundred species of insects of all suborders; Belgium exhibits in her model school-house a teaching collection, representing two hundred genera of insects, while a few other countries are unintentionally represented by specimens of *Bruchus* emerging from leguminous seeds in their exhibits.

Mr. D. F. Taylor, Birmingham, England, exhibits in the Main Building a large lot of gilded insect pins. This is apparently the only exhibit of entomologists' special apparatus outside of the case of insecticides in the Government Building.

A few plates or figures of insects are exhibited. The United States Government Building contains a series of about two hundred and seventy-five octavo plates of injurious insects, showing their mode of operation, by Townsend Glover of Washington.

In the Ladies' Pavilion, six sample plates from Edwards'

¹ See *New York Daily Graphic*, xi, 494-495, for notes concerning this exhibit.

Butterflies of North America testify to Miss Peart's extraordinary ability in figuring insects on stone. In the same building, a Mrs. Stevens, seventy years old, exhibits a fine colored figure of *Attacus cecropia*.

In the gallery of the Main Building, Mr. L. Trouvelot, of Cambridge, Mass., exhibits a book of colored figures of the Lepidoptera of Massachusetts.

The educational department of the Government of the Netherlands exhibits four wall figures of structural entomology; the Society for Public Utility, of Switzerland, a plate of figures of Phylloxera; and J. S. Bray, of Sydney, a photograph of a collection of twelve cases of insects, of all the suborders, from New South Wales; all in the Main Building.

Of insects used for ornamentation, there are a few poor exhibits. In the Main Building Melles. M. and E. Natté, of Rio de Janeiro, sell the more brilliant species of Brazilian Coleoptera and Lepidoptera, for decorative purposes.

Panels made by pressing butterflies and ferns between two glass plates, and supplying a background of dark paper, are exhibited in the British Department of the Main Building. In the East Indian Department of the same building, is a broad-brimmed palm-leaf hat beautifully decorated with a row of green elytra from a species of Indian Buprestis.

In the Agricultural Building, Mr. Richard Hartley, a taxidermist of Philadelphia, exhibits a fancy design and two figures of churches, one composed chiefly of Lepidoptera, and the other a Coleopterous structure, made of nothing but specimens of *Chrysochus auratus*, *Melanotus communis*, and *Chrysomela clivicollis*.

For the benefit of entomologists who camp every summer, mention should be made of models of tents exhibited by Davies, Turner & Co., of London. Besides making some very convenient combined tents and hammocks, the firm manufactures a military tent, with camp bedsteads, suitable for eighteen men, which weighs but six and one-half pounds per man.

There are a few other exhibits of camping equipage, and, perhaps, some of insects, overlooked in my hasty visit, but I

have endeavored to give the entomology of the Centennial Exhibition as fully as the limited space allowed this article will permit. *Geo. Dimmock.*

BIBLIOGRAPHICAL RECORD.

Authors and Societies are requested to forward their works to the Editor at the earliest date possible. We ask our readers to inform us of the publication especially of those works which are not generally consulted by entomologists. *B. Pickman Mann.*

(Continued from page 200.)

Nos. 618 and 619 are from **The Annals and Mag. Nat. Hist.** ser. 4, vols. xvi, xvii.

* 618. A. R. GROTE. The Effect of the Glacial Epoch upon the Distribution of Insects in North America. xvi, p. 440-442.

[Reprint from Amer. Journ. Sci. and Arts, vol. ex (ser. 3, vol. x), p. 335-338.] "A brief statement of the phenomena assumed to have attended the advent of the glacial period," and of "the action presumed to have accompanied" the retirement of the ice-sheet, in the endeavor "to show that the present distribution of certain insects may have been brought about by the phenomena." [Cited also in Rec., Nos. 507 and 586.]

* 619. PROF. T. THORELL. On the Classification of Scorpions. xvii, p. 1-15.

An "attempt at a systematical arrangement of the order of Scorpions, based on the examination of a rather limited number (about 90) of species." Historical and critical review of some previous writings; remarks on nomenclature in general. Defines synoptically 30 genera of 4 families, with citation of types and bibliographical and descriptive foot-notes. Describes *Lepreus*, *Phassus*, *Rhopalurus*, *Hadrurus*, *Iurus*, *Uroctonus*, *Pandinus*, *Palamnaeus*, *Miaophonus*, *Hormurus*, *Ioctonus*, *Euscorpius* = 12 n. gen.; describes 7 (*Vejovis intrepidus* from Mexico, *Uroctonus mordax* from California = 2 N. A.) n. spp. [See PSYCHE, vol. i, p. 209-214.]

* 620. The **Report of the Entomological Society of Ontario, 1873**, including a Report on some of the Noxious, Beneficial and Common Insects of the Province of Ontario. Prepared for the Honourable the Commissioner of Agriculture on behalf of the Society. Printed by Order of the Legislative Assembly. Toronto: 1874. 8vo. pg. 4, 41, fig. 1-31, contains the following, and Nos. 621 to 625.

Title, Contents. Annual business reports and report of the annual meeting; annual address of the President (C. J. S. Bethune) [history of